Kean University

Kean University implements advanced border-to-border wireless network across 150-acre campus and showcases all-wireless science, technology and math building.

KEAN UNIVERSITY · 1855 ·

WORLD-CLASS EDUCATION

"Trapeze was the ideal choice for Kean because of the completeness of the solution and the central management capability. My small team is able to support a large number of APs to provide students with secure, reliable wireless connectivity wherever they may be on campus."

—Joseph Marinello
Network and Telecommunications Director

Founded in 1855, Kean University has grown to become one of New Jersey's largest institutions of higher learning. In 1958, Kean moved from Newark to Union and currently occupies over 150 acres in Union and Hillside Townships. Kean was granted university status on September 26, 1997. While maintaining its significant role in the training of teachers, Kean has become a comprehensive institution offering 48 under-graduate and 28 graduate degree programs serving some 15,000 students. Across four undergraduate colleges and the Nathan Weiss Graduate College, Kean's academic programs cover an exceptional range of disciplines.

Beyond its academic leadership, Kean has become known for its advanced technology to support its education programs and initiatives. In fact, students considering attending Kean take this into consideration, so it was with this in mind that the president of the university, Dr. Dawood Farahi, issued a mandate that the university was to enable 100 percent con-nectivity for students, faculty and staff, no matter where they were on campus. Network and Telecommunications Director Joseph Marinello, along with his team, and with the help of Trapeze Networks' partner Johnston Communications Voice & Data, set out to fulfill this mandate. They chose Trapeze Networks for a complete wireless network covering more than 150 acres, including 40 buildings and the entire outdoor space on the campus.

Students expect wireless connectivity, Kean expects central manageability and reliable, borderless access

Today's students come to college expecting to have the same type of reliable, wireless broadband connectivity that they have at home. Through Dr. Farahi's leadership, the university planned implementation of Kean Mobile, a suite of applications intended to facilitate students' academic success. Included in Kean Mobile are access to the university directory application, university maps, course and professor lookup, way finding, communica-tion of news and events, and mobile offerings for online courses. According to Johnston Communications Network Consultant Martin Slouka, Marinello and his team knew that the underlying wireless network would have to be robust. "The network has to support the grow-ing number of users and applications while providing for secure access required by educa-tional institutions," said Slouka.

Kean University chose Trapeze because of its central manageability, due to the thin AP model, and the scalability to support access for over 15,000 students. Marinello and his team valued the ability to easily make system-wide configuration changes and to monitor the system from one central platform; the dynamic RF features were also attractive because they enable Kean's IT department to dynamically manage the RF to eliminate any interference on the network.

DESCRIPTION
- Approximately 15,000 students, including 1,756 on-campus residents.
- Approximately 900 faculty and staff.
- Two new residence halls.
- Newly opened NJCSTM facility.

OBJECTIVES
- Implement an indoor/outdoor wireless network to support the university's initiative to help students succeed both academically and socially.
- Cultivate a campus where communications are easy, encompassing mobile phones, lap tops, MP3 players and, eReaders.
- Install a solution that is scaleable and centrally manageable by limited staff.
- Ensure dynamic RF management to reduce interference.

SOLUTION
- Mobility Exchange® MX-2800 Controller.
- Mobility Exchange MX-200R Controller.
- Mobility Point® MP-432.
- Mobility Point MP-82.
- Mobility Point MP-632.
- RingMaster® Appliance RM-200.
- SmartPass™.

RESULTS
- Border-to-border, campus-wide wireless supporting more than 15,000 students.
- Students, faculty and staff have secure, reliable connectivity throughout the campus.
- Marinello and his staff of two manage the entire network from one central location.
- Future-proofed for 802.11n to support new security and point-of-sale initiatives.

Kean University (continued)

Also critical in Kean's decision to go with Trapeze was the solution's support for seamless roaming. Now, students, faculty and staff can roam throughout the 150-acre campus, whether indoor or out, and maintain access to the network. "The outdoor mobile solution augments the indoor implementation," said Marinello. "Our students can roam border-to-border on campus and maintain connectivity."

Kean chooses Trapeze Networks for all-wireless New Jersey Center for Science, Technology and Mathematics

Two years ago, the university broke ground on the New Jersey Center for Science, Technology & Mathematics (NJCSTM), a world-class learning center for high school students entering as freshmen up through graduate and post-graduate studies. Dr. Farahi intended for the university to "raise the bar" to ensure the center would support the most advanced technology possible to better facilitate and support its advanced educational and scientific community programs. Marinello's team chose to forego the traditional wired infrastructure and installed a comprehensive wireless network, all based on Trapeze' solutions: voice, video and data are all supported through the Trapeze Networks wireless infrastructure.

The university also recently built two new residence halls housing 900 students; the Trapeze solution was extended to support these two new facilities. According to Marinello, in any given evening, his team sees up to 700 simultaneous wireless users in those two halls alone; university-wide, the network will support up to 1,200 simultaneous users at one time, with no degradation in service or accessibility.

This is directly in line with Dr. Farahi's vision. "Kean University believes in the use of technology to enrich the student experience," said Dr. Farahi. "It is crucial that technology be instrumental in shaping students' education, and this is why this project has been approved and receives my full support."

Next steps for Kean: 802.11n transition to support new applications

In the future, Marinello's team will be busy transitioning the network from 802.11a/b/g to 802.11n; this project will be complete within the next fiscal year. Through this upgrade, the university plans to support wireless security cameras, location-based services (including point-of-sale services such as food vending in the sports stands) and certification for interoperability for security card readers, security cameras, handheld POS readers, IP phones and walkie-talkies. "Our plan is to continue to invest in Kean's mobile and wireless strategies, and Trapeze is a major component of this plan," said Marinello.